Otay Ranch Resource Management Plan
Short-Term Implementation Program

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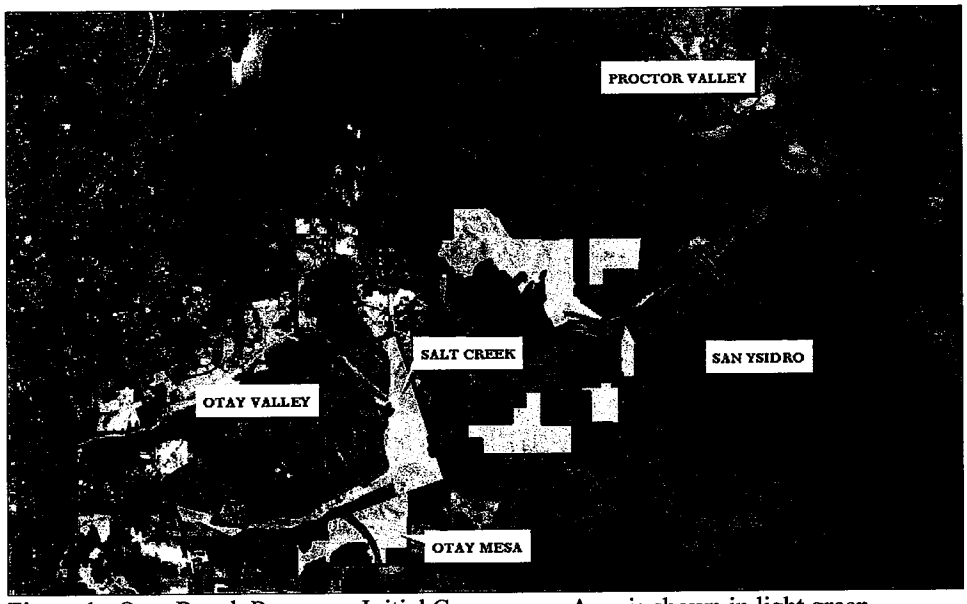

Figure 1: Otay Ranch Preserve. Initial Conveyance Area is shown in light green.

Section 1: San Ysidro Mountains

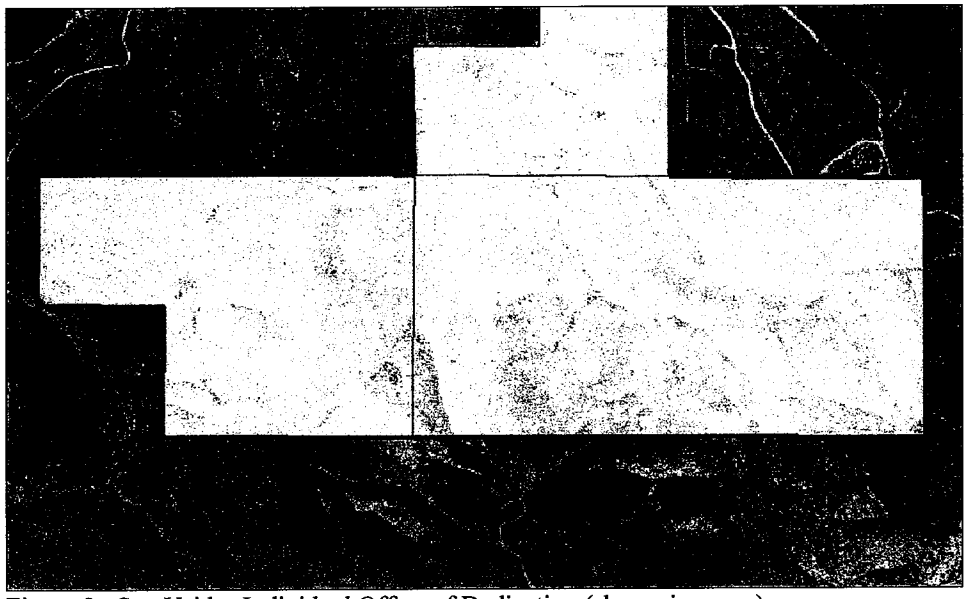

Figure 2: San Ysidro Individual Offers of Dedication (shown in green)

A. Introduction

Approximately 516 acres of land in the San Ysidro Mountains parcel were recently conveyed to the Otay Ranch Preserve Owner/Manager (POM) through Irrevocable Offers of Dedication (IODs). The northern most parcel will be conveyed into Preserve in Spring, 2004. This Short-Term Implementation Program accompanies acceptance of the IODs into the Otay Ranch Preserve. It complies with the conditions of the Otay Ranch Resource Management Plan (RMP), Phases 1 and 2 to implement management guidelines for the Preserve. Upon acceptance of the IODs and this Implementation Program, the Preserve Owner/Manager (POM) will manage the San Ysidro Mountains parcel as part of the Otay Ranch Preserve. Completion of an Implementation Program for long-term management of the Preserve is underway, and will also comply with RMP provisions.

B. Implementation Actions

This document identifies 14 management issues relevant to this parcel. They are described in the text and summarized in a matrix at the end of this document. The matrix lists the actions needed, estimated short-term costs and priority of the various management issues.

Priority 1 items need to be done first and immediately. Priority 2 items are next in importance, once the Priority 1 items are complete. Priority 3 items have no urgency, but planning for their completion will be accomplished in the short term.

The following section describes the required implementation strategies for monitoring and managing the Preserve. The first management issues are biological resources, followed by other types of categories.

1. Coastal Sage Scrub (CSS) and Maritime Succulent Scrub (MSS)[1]

A plan for CSS and MSS is provided in RMP2, Appendix F8. To comply with these requirements and manage the property effectively, the following measures are required within CSS and MSS habitat: 1) Conduct a baseline study for CSS on the San Ysidro parcel; 2) Establish one 100-acre study plot to monitor the CSS habitat; 3) Monitor the study plot annually every year for the first five years, then every three years.

In addition to the general habitat monitoring described above, the RMP requires sensitive species monitoring; a list of sensitive species is provided in RMP2, Appendix F11.

Sensitive Plants

The POM will conduct baseline surveys to identify sensitive plant species on the entire parcel. Both perennial and annual sensitive plant species will require monitoring. Study plots will be established for the major populations of each of these species. Four permanent line-intercept transects 100 meters long will be established in each study plot, where appropriate. The POM can select these locations and their lengths. For each point-transect, vegetation data will be compiled every three years, after the initial annual monitoring for the first five years. According to RMP2, there are potentially thirty (30) species of sensitive plants within CSS habitat. It is not known which, if any of these species, is present within the San Ysidro Mountains parcel. Populations of these sensitive plants, if present within the parcel, will be identified and monitored:

Perennials
San Diego County needlegrass
California adolphia
Otay manzanita
San Diego bur-sage
San Diego sagewort
Dense reed grass
San Miguel savory
Southern mountain misery
Summer holly
Mexican flannelbush
San Diego barrel cactus

[1] The 1995 study outline and a summary of previously collected data are provided in RMP2, Appendix F1.

Gander's pitcher-sage
Snake cholla
Munz's sage
San Diego sunflower
Greene's ground cherry
Coulter's matilija poppy
Ashy spike moss
Narrow-leaved nightshade

Annuals
San Diego thorn mint
Western dichondra
Variegated dudleya
Dunn's mariposa lily
Slender-pod caulanthus
Fallbrook spine-flower
Orcutt's bird's beak
Palmer's grappling hook
Otay tarplant
Dwarf pepper-grass
San Diego goldenstar

In addition to the possible presence of these sensitive species, the San Ysidro Mountains IOD property contains one listed rare, threatened, and endangered plant species. A new species of Monardella (*Monardella* sp.) is present in the bottom of a deep drainage on the west side of the San Ysidro Mountain parcel. There are several dozen individual plants. Originally thought to be Willowy monardella, this plant is a new taxon that is known only from this area. Publication of the new name for this plant will be appearing in the future. One of the study plots shall include the Monardella population.

Sensitive Animals

Animal species monitoring can be done in conjunction with habitat surveys. The two (2) primary bird species to be monitored are:

- California gnatcatchers (CAGN), and
- Cactus wrens (CAWR).

The following program covers both California gnatcatcher and Cactus wren populations, except where specifically noted. Monitoring of California gnatcatcher and Cactus wren populations shall be conducted annually for the first five years after conveyance, and then every three years after the initial five-year period (RMP2, Appendix F11, page 23). U.S. Fish and Wildlife Service (USFWS) guidelines require three surveys of the 100-acre polygon, at least one week apart, during the breeding season (15 February through 15 July), unless otherwise modified by adopted subarea plans. The San Ysidro parcel shall

have one 100-acre polygon to monitor habitat quality. Recent protocols currently in use by San Diego National Wildlife Refuge designed to better detect breeding pairs without counting fledged young, shift the timing of the surveys to 15 February to 1 April. The POM must notify USFWS if the revised survey season is used.

Each plot shall be visited enough times to map the breeding territories of all pairs within the plot. For CAWR, the plot can be selected to include a cactus patch large enough for a breeding pair, or several broken patches can be identified. Since territories range in size from 0.5 to 20 acres with an average of 7 acres, some plots can be surveyed more quickly than others. Repeat visits may be necessary for plots with fewer known individuals. Increasing the number of visits to 6 or 8 will bring the confidence levels to above 95%. The time between visits is not important when studying a plot with known populations but is more important to identify plots without resident birds. These survey plots shall be used for future monitoring. For reference purposes, the specific locations of survey plots shall be topographically mapped and also recorded using GPS coordinates (UTM grid). The surveys shall be repeated every two to three years, given the short lifespan of CAGN (the RMP requires annual surveys for the first five years, then surveys every three years). The USFWS Carlsbad Office is currently working on a regional, countywide approach that would use random UTM grid intersections for annual point counts of CAGN. When this protocol is accepted, the preserve manager may have the option, in consultation with the USFWS, to adopt the regional approach and decide whether or not to continue the plot counts and the ranch-wide surveys. The protocols described in the above paragraphs and the required ranch-wide surveys are currently sufficient to fulfill monitoring obligations for these two bird species.

A ranch-wide walkover survey for CAGN and CAWR shall be conducted every five years. If studies of existing CSS habitat suggest a decline in quality, the POM shall consult with the City, County, and wildlife agencies to determine whether remedial actions are needed.

Amphibian and reptile monitoring can be done in conjunction with the ongoing CSS habitat monitoring. There are two (2) sensitive species found in CSS habitat:

- Orange-throated whiptail, and
- San Diego horned lizard.

Monitoring for these species is very labor-intensive. There are no specified protocols in the RMP for amphibian and reptile monitoring. Surveys for Orange-throated whiptail and San Diego horned lizard shall be done when weather is conducive to detecting these animals. The identification of San Diego horned lizard scat is taken as evidence of their presence.

Mammal sightings shall be noted during the habitat surveys. In particular, Black-tailed jackrabbit and San Diego desert woodrat middens should be noted and mapped using GPS coordinates.

Two sensitive invertebrate that species may occur in CSS are:

- Quino checkerspot butterfly, and
- Hermes copper butterfly.

Most of the Preserve is within Quino checkerspot critical habitat. Host plants for Quino checkerspot are Dwarf plantain, Woolly plantain, White snapdragon, and Threadleaved bird's beak. All of the host plants occur in CSS, open chaparral, grassland, and similar open canopy plant communities. Dwarf plantain is often associated with soils containing fine-textured clay or with cryptogamic crusts (soil crusts composed of fungi, moss, or lichens). Sightings shall be recorded in conjunction with habitat surveys, and host plants shall be noted and plotted using GPS sites.

The Chula Vista Multiple Species Conservation Program (MSCP) Subarea Plan includes coverage for the Quino checkerspot. The City's recovery plan consists of the following measures:

- A Quino Scientific Advisory Committee shall assist the City Habitat Manager in determining priority tasks for the Quino recovery program.
- As land is conveyed into the Otay Ranch Preserve, monitoring by the POM shall include:
    - monitoring of overall habitat quality in the preserve,
    - monitoring the effectiveness of Quino checkerspot habitat enhancement and restoration efforts, and
    - limited census of butterfly populations.
- Initial monitoring shall consist of surveying lands known to contain butterflies, suitable but unoccupied habitat, and all restoration sites.
    - Surveys shall be conducted during the second or third week of the flight season established by the USFWS, and only during optimal weather conditions.
    - The project biologist shall have a valid USFWS permit.
- Once the city's butterfly population reaches 25 individuals, the census effort shall be concentrated on the two locations with the highest density within the City.
- Recovery efforts shall be coordinated with the County's butterfly population data.

Short-term management for Quino checkerspot butterflies within the San Ysidro IOD property shall consist of conducting the baseline surveys to determine whether there are butterflies or suitable habitat within the project area. The Quino Checkerspot Butterfly Amendment to the County of San Diego's Multiple Species Conservation Program (Draft March, 2003) provides information about butterfly populations in Village 15, which is adjacent to this conveyance. With butterflies present in Village 15, it is nearly certain that populations will be found in the conveyed lands.

There is currently no requirement to do surveys for Quino checkerspot in preserved lands within the County of San Diego. In the interim, the City of Chula Vista's Plan shall be used. As of the date of this document, the County's MSCP is being amended to include

consideration of the Quino checkerspot butterfly. This amendment may require additional surveys to cover this species. The costs of these surveys are not included in this document. Additional funding may be needed to meet the requirements of the County's MSCP amendment.

2. Grassland

Basic habitat monitoring is required, as described in RMP2, Appendix F11, pages 13-15 and 28-29. Monitoring shall be conducted every three years. One 100-acre study plot should be established to monitor native grassland habitat and sensitive plant and animal species in the management area.

Sensitive plant and animal species found within grasslands habitat require separate monitoring procedures, in some cases in addition to the habitat monitoring procedures described above.

Sensitive Plants

There are no special requirements for monitoring sensitive plants in grassland habitat. The habitat studies described above will meet the monitoring requirements for sensitive plants.[2]

Sensitive Animals

Sensitive bird species that utilize grasslands for nesting and foraging include Tricolored blackbird, Golden eagle, Burrowing owl, Northern harrier, White-tailed kite, Prairie falcon, Grasshopper sparrow, California horned lark, and Loggerhead shrike. Monitoring for sensitive bird species shall be done as part of the basic monitoring program, using the established study plots.[3]

Two sensitive mammal species occur in grassland habitat: the Southern grasshopper mouse and American badger. There has been one badger sighting in the Otay Valley parcel. No Southern grasshopper mouse sightings have occurred. Any observations of badger dens shall be noted through GPS mapping by the POM during routine monitoring.[3]

Quino checkerspot butterflies may be found within native grassland habitat. See the discussion on pages 4 and 5 for details on monitoring and managing this species.

3. Woodland[4]

[2] See RMP2, Appendix F11.
[3] See RMP2, Appendix F11.
[4] Protocols for Woodland conservation are given in RMP2, Appendix F11, pages 16-17, 30.

Tecate Cypress extends down the main canyon on the property. Two study plots shall be established to monitor woodland habitat in locations selected by the POM. Monitoring shall be conducted every three years.

Sensitive plant and animal species are found within woodland habitat. No separate monitoring protocols are required beyond the habitat monitoring described above.

Sensitive Plants

Sensitive plants that shall be monitored as part of the general habitat monitoring process are:

- Tecate cypress, and
- Engelmann oak.

These plants will not require separate monitoring procedures in addition to the habitat monitoring procedures described above.

Sensitive Animals

Raptors in Woodland habitat shall be monitored as part of the overall habitat monitoring protocols. Raptor nests shall be checked for activity at least once every three years.

Two (2) sensitive invertebrates are present in Woodland habitat:

Thorne's hairstreak butterfly, and
Harbison's dun skipper butterfly.

Thorne's hairstreak occurs in southern interior cypress forest, and Harbison's dun skipper occurs in Riparian Oak Woodlands where there is San Diego sedge. Spring surveys for these butterflies shall be conducted annually if funds are available. As part of these annual studies, weekly surveys shall be conducted in early February to early March for Thorne's hairstreak, and during June for Harbison's dun skipper.

4. Wildlife Corridors

There are two corridors entering this parcel (RMP2, Appendix F3). One is the Otay River gorge; a corner of the conveyance parcel abuts the gorge. The other corridor is a deep, steep-sided drainage that runs into Lower Otay Lake, through City of San Diego land and the area proposed for development. The California Department of Fish and Game (DFG) owns the land immediately east of the conveyance parcel, providing connectivity to Bureau of Land Management (BLM) land in the Otay Mountains. The Lower Otay Lake corridor shall be monitored to evaluate wildlife activity between the reservoir, and City of San Diego, DFG, and BLM open space lands. The required monitoring can be accomplished cooperatively with these agencies.

5. Raptors

Important raptor roosting, nesting, and foraging locations have been identified within this parcel (RMP2, Appendix F4). Prominent snags located on the lower part of the San Ysidro Mountains parcel shall be retained. Lower Otay Lake has been identified as an area of major importance for raptors.

6. Cultural Resources

An intensive cultural resource survey shall be conducted for the entire San Ysidro parcel (RMP, Policy 2.12). There is one known archaeological site within this conveyance, located above the Otay River gorge. The site is designated as temporary number OR-60A,B,C.

7. Research

Future research directions can be identified as a long-term task. Surveys for Quino checkerspot and other sensitive butterflies shall be conducted as part of a research project if funding is available.

8. Access

The POM shall evaluate possible trail linkages to other open space properties. Identify the main access points for preserve management and restrict unauthorized access.

9. Easements

Existing utility and other easements are identified in RMP1, figures 14-18. Identify and modify existing easements to include RMP language, if feasible, through negotiations with the easement holders.

10. Fire Suppression

Coordinate with DFG, BLM, and USFWS on fire suppression and management issues; provide maps showing sensitive natural and cultural resources to these agencies. Reduction of fuel loads within the Preserve is addressed in the City of Chula Vista's MSCP subarea plan, and is incorporated herein by reference.

11. Erosion Control

Inspect drainages after storm events and implement remedial efforts if needed. Use native soil in sandbags if required.

12. Edge Effects

Edge plans shall be developed for all sectional planning areas (SPAs) that include areas adjacent to the Preserve (RMP2, page 221). No structures other than fencing or walls are allowed on the edge of the Preserve (RMP, Policy 7.2, pages 114-115). Maintenance of edge areas shall be the responsibility of the landowner, not the POM.

13. Preserve Management

Provide signage with 24-hour contact information. Promptly remove trash and repair defaced and damaged signs and fences. Identify disturbed areas or old roads or access points that need to be closed, and implement a revegetation program in those areas, in consultation with a qualified biologist. Natural regeneration is the most successful method of habitat maintenance. Control of weeds and intrusive non-native plants is key to natural regeneration of damaged or disturbed habitat. Weed eradication is essential to create a condition for native plant seedling production. Ideally, weeding should continue until 1) annual weed growth is reduced to 25% of former density; and 2) native species have covered the formerly weedy area. Disturbance to the soil surface should be minimal; cut the weeds off at the ground surface before they flower, removing the cut weeds.

Grazing will not be allowed on lands once they are in the Preserve unless specific studies indicate that some level of grazing would be appropriate to maintain specific biological resources. Prior to conveyance, individual landowners shall cease grazing on all lands offered for dedication. The POM shall report any cattle on or near the IOD conveyance to the party responsible for the grazing activities.

14. Baseline Studies

A baseline study provides a reference point from which change is measured. No baseline resource studies have been done for the San Ysidro parcel. Baseline studies will be needed for project areas that have not been previously surveyed for resources.

Section 2: Salt Creek

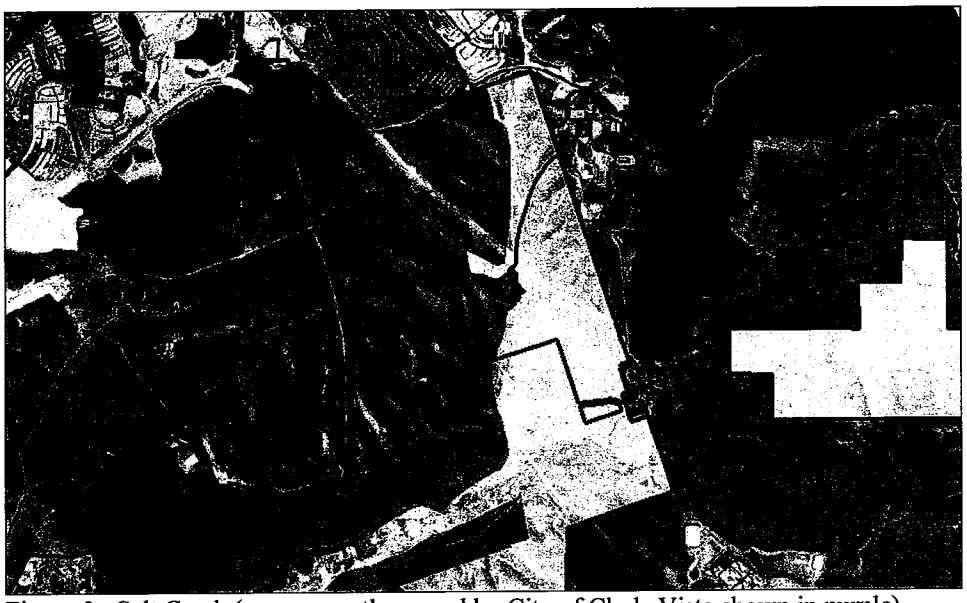

Figure 3: Salt Creek (area currently owned by City of Chula Vista shown in purple)

A. Introduction

The City of Chula Vista owns approximately 340 acres of open space in Salt Creek, within the Otay Ranch Preserve. The Preserve Owner/Manager (POM) will manage this open space for the Otay Ranch Preserve. This document complies with the conditions of the Otay Ranch Resource Management Plan (RMP), Phases 1 and 2 to implement management guidelines for the Preserve. Completion of an Implementation Program for long-term management of the Preserve is underway, and will also comply with RMP provisions.

The Salt Creek property is characterized by extensive Coastal Sage Scrub habitat and a prominent drainage into Otay Valley. Note that the Salt Creek project area, which is part of the Otay Valley parcel[5], has already been divided into 100-acre polygons. The baseline data keyed to these polygons already exists (RMP2, Appendix F1, figure 2).

B. Implementation Actions

[5] The Otay Ranch General Development Plan divides the Otay Ranch into 3 areas: Proctor Valley, San Ysidro, and Otay Valley.

This document identifies 12 management issues relevant to this parcel. They are described in the text and summarized in a matrix at the end of this document. The matrix lists the actions needed, estimated short-term costs and priority of the various management issues.

Priority 1 items need to be done first and immediately. Priority 2 items are next in importance, following completion of the Priority 1 items. Priority 3 items have no urgency, but planning for their completion will be accomplished in the short term.

The following section describes the required implementation strategies for monitoring and managing the Preserve. The first management issues are biological resources, followed by other types of categories.

1. Coastal Sage Scrub (CSS) and Maritime Succulent Scrub (MSS)[6]

A plan for CSS and MSS is provided in RMP2, Appendix F8. The CSS habitat within this property has burned and is slowly recovering. Monitoring is particularly important in this area to determine whether native plants are regenerating and non-native species are not replacing the habitat. Weeding and removal of invasive non-natives will be critical. To comply with these requirements and manage the property effectively, the following measures are required within CSS and MSS habitat: 1) establish one 100-acre study plot to monitor the CSS/MSS habitat; and 2) monitor the study plot annually every year for the first five years, then every three years.

In addition to the general habitat monitoring described above, the RMP requires sensitive species monitoring; a list of sensitive species is provided in RMP2, Appendix F11.

Sensitive Plants

The POM will conduct baseline surveys to identify sensitive plant species throughout the parcel. Both perennial and annual sensitive plant species will require monitoring. Study plots will be established for the major populations of each of these species. Four permanent line-intercept transects 100-meters long will be established in each study plot, where appropriate. The POM can select these locations and their lengths. For each point-transect, vegetation data will be compiled every three years, after the initial annual monitoring for the first five years. According to RMP2, there are potentially thirty (30) species of sensitive plants within CSS/MSS habitat. It is not known which, if any of these species, is present within the Salt Creek parcel. Populations of these sensitive plants, if present within the parcel, will be identified and monitored:

Perennials
San Diego County needlegrass
California adolphia
Otay manzanita

[6] The 1995 study outline and a summary of previously collected data are provided in RMP2, Appendix F1.

San Diego bur-sage
San Diego sagewort
Dense reed grass
San Miguel savory
Southern mountain misery
Summer holly
Mexican flannelbush
San Diego barrel cactus
Gander's pitcher-sage
Snake cholla
Munz's sage
San Diego sunflower
Greene's ground cherry
Coulter's matilija poppy
Ashy spike moss
Narrow-leaved nightshade

Annuals
San Diego thorn mint
Western dichondra
Variegated dudleya
Dunn's mariposa lily
Slender-pod caulanthus
Fallbrook spine-flower
Orcutt's bird's beak
Palmer's grappling hook
Otay tarplant
Dwarf pepper-grass
San Diego goldenstar

In addition to the possible presence of these sensitive species, the Salt Creek property contains a listed species: Otay tarplant (*Hemizonia conjugens*) is located in Salt Creek. One of the study plots shall include the Otay tarplant population.

Sensitive Animals

Animal species monitoring can be done in conjunction with habitat surveys. The two (2) primary bird species to be monitored are:

- California gnatcatchers (CAGN), and
- Cactus wrens (CAWR).

The following program covers both California gnatcatcher and Cactus wren populations, except where specifically noted. Monitoring of California gnatcatcher and Cactus wren populations shall be conducted annually for the first five years after conveyance, and then

every three years after the initial five-year period (RMP2, Appendix F11, page 23). U.S. Fish and Wildlife Service (USFWS) guidelines require three surveys of the 100-acre polygon, at least one week apart, during the breeding season (15 February through 15 July), unless otherwise modified by adopted subarea plans. The Salt Creek parcel shall have one 100-acre polygon to monitor habitat quality. Recent protocols currently in use by San Diego National Wildlife Refuge were designed to better detect breeding pairs without counting fledged young; these protocols shift the timing of the surveys to 15 February to 1 April. The POM must notify USFWS if the revised survey season is used.

Each plot shall be visited enough times to map the breeding territories of all pairs within the plot. For CAWR, the plot can be selected to include a cactus patch large enough for a breeding pair, or several broken patches can be identified. Since territories range in size from 0.5 to 20 acres with an average of 7 acres, some plots can be surveyed more quickly than others. Repeat visits may be necessary for plots with fewer known individuals. Increasing the number of visits to 6 or 8 will bring the confidence levels to above 95%. The time between visits is not important when studying a plot with known populations but is more important to identify plots without resident birds. These survey plots shall be used for future monitoring. For reference purposes, the specific locations of survey plots shall be topographically mapped and also recorded using GPS coordinates (UTM grid). The surveys shall be repeated every two to three years, given the short lifespan of CAGN (the RMP requires annual surveys for the first five years, then surveys every three years). The USFWS Carlsbad Office is currently working on a regional, countywide approach that would use random UTM grid intersections for annual point counts of CAGN. When this protocol is accepted, the preserve manager may have the option, in consultation with the USFWS, to adopt the regional approach and decide whether or not to continue the plot counts and the ranch-wide surveys. The protocols described in the above paragraphs and the required ranch-wide surveys are currently sufficient to fulfill monitoring obligations for these two bird species.

A ranch-wide walkover survey for CAGN and CAWR shall be conducted every five years. If studies of existing CSS/MSS habitat suggest a decline in quality, the POM shall consult with the City, County, and wildlife agencies to determine whether remedial actions are needed.

Amphibian and reptile monitoring can be done in conjunction with the ongoing CSS/MSS habitat monitoring. There are two (2) sensitive species found in CSS/MSS habitat:

- Orange-throated whiptail, and
- San Diego horned lizard.

Monitoring for these species is very labor-intensive. There are no specified protocols in the RMP for amphibian and reptile monitoring. Surveys for Orange-throated whiptail and San Diego horned lizard shall be done when weather is conducive to detecting these animals. The identification of San Diego horned lizard scat is taken as evidence of their presence.

Mammal sightings shall be noted during the habitat surveys. In particular, Black-tailed jackrabbit and San Diego desert woodrat middens should be noted and mapped using GPS coordinates.

Two sensitive invertebrate that species may occur in CSS/MSS are:

- Quino checkerspot butterfly, and
- Hermes copper butterfly.

Most of the Preserve is within Quino checkerspot critical habitat. Host plants for Quino checkerspot are Dwarf plantain, Woolly plantain, White snapdragon, and Threadleaved bird's beak. All of the host plants occur in CSS, open chaparral, grassland, and similar open canopy plant communities. Dwarf plantain is often associated with soils containing fine-textured clay or with cryptogamic crusts (soil crusts composed of fungi, moss, or lichens). Sightings shall be recorded in conjunction with habitat surveys, and host plants shall be noted and plotted using GPS sites.

The Chula Vista Multiple Species Conservation Program (MSCP) Subarea Plan includes coverage for the Quino checkerspot. The City's recovery plan consists of the following measures:

- A Quino Scientific Advisory Committee shall assist the City Habitat Manager in determining priority tasks for the Quino recovery program.
- As land is conveyed into the Otay Ranch Preserve, monitoring by the POM shall include:
    - monitoring of overall habitat quality in the preserve,
    - monitoring the effectiveness of Quino checkerspot habitat enhancement and restoration efforts, and
    - limited census of butterfly populations.
- Initial monitoring shall consist of surveying lands known to contain butterflies, suitable but unoccupied habitat, and all restoration sites.
    - Surveys shall be conducted during the second or third week of the flight season established by the USFWS, and only during optimal weather conditions.
    - The project biologist shall have a valid USFWS permit.
- Once the city's butterfly population reaches 25 individuals, the census effort shall be concentrated on the two locations with the highest density within the City.
- Recovery efforts shall be coordinated with the County's butterfly population data.

Short-term management for Quino checkerspot butterflies within the Salt Creek property consists of conducting the baseline surveys to determine whether there are butterflies or suitable habitat within the project area.

2. Wetland and Riparian

The bottom of the drainage through this property contains a small thread of wetland and/or riparian habitat.[7] One study plot shall be established to monitor this habitat. Habitat shall be monitored every three years. While it is not likely that major populations of sensitive species occur in this narrow drainage, the POM will need to survey and identify the species mentioned below.

Sensitive plant and animal species found within wetlands and riparian habitat may require separate monitoring procedures, in addition to the habitat monitoring procedures described above. The following material is summarized from RMP2, Appendix F11.

Sensitive Plants

Two (2) perennial plant species will require monitoring every three years. Study plots shall be established for the major populations of each of these species. Four permanent line-intercept transects 100-meters long shall be established in each plot where appropriate. The POM can select these locations and their lengths. For each point-transect, vegetation data shall be compiled every three years. Populations of the following sensitive plants shall be monitored are:

- San Diego marsh elder, and
- Spiny rush.

Sensitive Animals

Animal species monitoring shall be done in conjunction with the habitat surveys (every three years). The three (3) primary bird species to be monitored are:

- California yellow-billed cuckoo,
- Tricolored blackbird, and
- White-faced ibis

Annual surveys for Least Bell's vireo and Southwestern willow flycatcher shall be done if funding is available, and could be accomplished by agency or research personnel studying countywide occurrences of these species. The USFWS survey protocol for these species is eight site visits conducted at weekly intervals.

Freshwater marsh habitat shall be surveyed for the presence of the Tricolored blackbird every three years. Three surveys at least one week apart during the breeding season (mid-March through late May) will be adequate. Breeding population size shall be estimated and documented in the survey results.

[7] Monitoring protocols are described in RMP2 Appendix F11, pages 10-13 and 26-28.

The four (4) species of reptiles and amphibians that shall be monitored every three years are:

- Arroyo southwestern toad,
- California red-legged frog,
- Southwestern pond turtle, and
- Two-striped garter snake.

Nocturnal visual surveys or audio strip transects can be used for frogs and toads. Surveys for Arroyo toad, Southwestern pond turtle, and Two-striped garter snake shall be conducted in suitable habitat every three years to determine presence/absence.

Comment [a1]: If the Salt Creek Parcel is in the City – why are we referring to the County's Subarea Plan?

3. Grassland

Monitoring shall be conducted every three years[8]. One 100-acre study plot should be established to monitor native grassland habitat and sensitive plant and animal species in the management area.

Sensitive plant and animal species found within grasslands habitat require separate monitoring procedures, in some cases in addition to the habitat monitoring procedures described above.

Sensitive Plants

There are no special requirements for monitoring sensitive plants in grassland habitat. The habitat studies described above will meet the monitoring requirements for sensitive plants.

Sensitive Animals

Sensitive bird species that utilize grasslands for nesting and foraging include Tricolored blackbird, Golden eagle, Burrowing owl, Northern harrier, White-tailed kite, Prairie falcon, Grasshopper sparrow, California horned lark, and Loggerhead shrike. Monitoring for sensitive bird species shall be done as part of the basic monitoring program, using the established study plots.[9]

Two sensitive mammal species occur in grassland habitat: the Southern grasshopper mouse and American badger. There has been one badger sighting in the Otay Valley parcel. No Southern grasshopper mouse sightings have occurred. Any observations of badger dens shall be noted through GPS mapping by the POM during routine monitoring.[3]

[8] Basic habitat monitoring is required, as described in RMP2, Appendix F11, pages 13-15 and 28-29.
[9] See RMP2, Appendix F11.

Quino checkerspot butterflies may be found within native grassland habitat. See the discussion on pages 4 and 5 for details on monitoring and managing this species.

4. Wildlife Corridors

Salt Creek is a considered a major corridor for wildlife in the RMP (RMP2, Appendix F3). Wildlife use of the corridor at either end of Salt Creek shall be monitored. The connection between Salt Creek and Otay Valley is critical for wildlife and habitat conservation.

5. Raptors

Raptor nesting and roosting locations were noted in Salt Creek (RMP2, Appendix F4). These nest site locations need to be updated and will require monitoring.

6. Cultural Resources

There are many archaeological sites along Salt Creek (RMP2, Appendix F10 and other technical reports on file at the City of Chula Vista). The locations of these resources are confidential, and are on file at the City of Chula Vista. Within the Chula Vista property, they are concentrated on the terraces of Salt Creek. Some of these sites may have been impacted by sewer line and other utility construction in the bottom of the creek. The POM will need to assess the condition of these sites. Stabilization may be necessary to prevent further damage to these resources.

7. Access

Public access to Otay Valley will be provided along the western edge of Salt Creek and through the university site. The main points of access for preserve management shall be identified by the POM, and unauthorized access shall be restricted.

8. Easements

Existing utility and other easements are identified in RMP1, figures 14-18. Identify and modify existing easements to include RMP language, if feasible, through negotiations with the easement holders. Specifically, actions conducted within utility easements shall be restricted during the breeding seasons of sensitive species, and access roads shall be as narrow as possible and shall avoid disturbing habitat during use and maintenance.

9. Fire Suppression

Because the area has burned recently, fire suppression actions are needed to protect the habitat as it recovers. Reduction of fuel loads within the Preserve is addressed in the City of Chula Vista's MSCP subarea plan, and is incorporated herein by reference.

10. Erosion Control

Observe and monitor urban runoff and detention basins, during and following storm events. Identify responsibility for each point source of potential pollution and erosion. Detention basins shall be earth-lined with a vegetation edge, with minimal long-term maintenance requirements following accommodation of sediment loads. Drainage channels shall be earth-lined and planted with native species. Sand bags must be filled with native soils. Protect dirt piles with tarps.

11. Edge Effects

Edge plans shall be developed for all sectional planning areas (SPAs) that include areas adjacent to the Preserve (RMP2, page 221). No structures other than fencing or walls are allowed on the edge of the Preserve (RMP, Policy 7.2, pages 114-115). Maintenance of edge areas shall be the responsibility of the landowner, not the POM.

12. Preserve Management

Provide signage with 24-hour contact information. Promptly remove trash and repair defaced and damaged signs and fences. Identify disturbed areas or old roads or access points that need to be closed, and implement a revegetation program in those areas, in consultation with a qualified biologist. Natural regeneration is the most successful method of habitat maintenance. Control of weeds and intrusive non-native plants is key to natural regeneration of damaged or disturbed habitat. Weed eradication is essential to create a condition for native plant seedling production. Ideally, weeding should continue until 1) annual weed growth is reduced to 25% of former density; and 2) native species have covered the formerly weedy area. Disturbance to the soil surface should be minimal; cut the weeds off at the ground surface before they flower, removing the cut weeds.

Grazing will not be allowed on lands once they are in the Preserve unless specific studies indicate that some level of grazing would be appropriate to maintain specific biological resources. Prior to conveyance, individual landowners shall cease grazing on all lands offered for dedication. The POM shall report any cattle on or near the IOD conveyance to the party responsible for the grazing activities.

Salt Creek
Short-Term Management

Subject	Short-Term Management	Initial Cost	Reference	Priority
1. Coastal Sage Scrub and Maritime Succulent Scrub	1. Establish one 100-acre study plot using the existing polygon system (RMP2, Appendix F1), with four permanent line-intercept vegetation transects 100 meters long in locations selected by the POM, as described in RMP2, Appendix F11, and monitor CSS habitat once a year for the first five years, then every three years. 2. Establish permanent photodocumentation stations in locations selected by the POM. 3. Conduct baseline surveys for Quino checkerspot butterflies or suitable habitat. 4. Identify populations of 30 sensitive plant species (see management plan text for the list of species possible on the property) and establish study plots to monitor the populations as part of the overall habitat monitoring. 5. Monitor 2 sensitive bird species, California gnatcatcher and Cactus wren, every year for the first five years, then every three years. 6. Monitor 2 sensitive reptile/amphibian species, Orange-throated whiptail and San Diego horned lizard, every three years. 7. Monitor 2 sensitive invertebrate species, Quino checkerspot butterfly and Hermes copper butterfly, directly or through identification of host plan	$5,000	RMP2, Appendix F1; RMP2, Appendix F11; County and City of Chula Vista MSCP	1
2. Wetland and Riparian	1. Establish one study plot within the wetland/riparian corridor and implement monitoring protocols defined in RMP2, Appendix F11, pages 10-13 and 26-28, and monitor the habitat every three years. 2. Identify 2 sensitive plant species, San Diego marsh elder and Spiny rush, and monitor these species every three years. 3. Monitor 3 sensitive bird species, California yellow-billed cuckoo, Tricolored blackbird, and White-faced ibis, every three years. 4. Monitor 4 sensitive reptiles/amphibian species, Arroyo southwestern toad, California red-legged frog, Southwestern pond turtle, and Two-striped garter snake, every three years.	$1,500	RMP2, Appendix F11, pages 10-13 and 26-28; County and City of Chula Vista MSCP	2
3. Grassland	1. Establish one 100-acre study plot within the native grasslands area of the property and implement monitoring protocols defined in RMP2, Appendix F11, pages 13-15 and 28-29 every three years. 2. Conduct baseline surveys for Quino checkerspot butterflies or suitable habitat.	$2,000	RMP2, Appendix F11, pages 13-15 and 28-29; County and	2
4. Wildlife Corridor	1. Maintain the viability of the corridor linking Salt Creek to Otay Valley (the location of the corridor is shown in RMP2, Appendix F3, Figures 2-2 and 4-2) : no paved trails, no fire management zones, no roads (except necessary road crossings), no fences that restrict wildlife movement, no structures, no controlled burns (RMP2, Appendix F3, page 4-7). 2. Establish four permanent line-intercept vegetation transects 100 meters long within the corridor at locations selectd by the POM. 3. Permanent photodocumentation stations shalll be set at each study site at locations selected by the POM.	$1,500	RMP2, Appendix F3, Figures 2-2 and 4-2; RMP2, Appendix F3, page 4-7	1
5. Raptors	1. Update current nesting and roosting locations as shown in RMP2, Appendix F4. 2. Establish a buffer zone with a radius of 3,000 feet around known golden eagle nest sites. 3 Restrict human activity near raptor nests during breeding season. 3. Retain large snags.	$1,000	RMP2, Appendix F4	2
6. Cultural Resources	1. No habitat restoration or preserve construction projects should be conducted in areas identified as cultural sites.	$0	Policy 2.12; RMP2, Appendix F10	2
7. Access	1. Identify main access points for preserve management. 2. Restrict unauthorized access to the preserve.	$2,000	Policy 6.3; Policy 6.4	1
8. Easements	1. Identify existing easements (refer to RMP1, figures 14-18) and permits to enter; modify the easement language if feasible to reflect RMP management requirements. 2. Provide appropriate signage and training for utility staff; obtain a staff contact for each utility and/or easement holder.	$5,000	Policy 6.6; RMP, figures 14-18; RMP2,pages 165-171	2
9. Fire Suppression	1. Salt Creek has burned twice in recent years and fire suppression actions are needed to protect recovering habitat. 2. Provide maps showing sensitive natural and cultural resources in the preserve to the City, CDF, and BLM in case of fire.	$2,000	Policy 6.7; Policy 6.8	1
10. Erosion Control	1. No immediate actions are necessary. 2. Make observations of erosion during and after storm events and take remedial actions if needed.	$0	RMP, Chapter 4.5	3
11. Edge Effects	1. No structures other than fencing or walls are allowed on the edge of the preserve (RMP, Policy 7.2, pages 114-115). 2. Edge plans shall be developed for all sectional planning areas (SPAs) that include areas adjacent to the Preserve (RMP2, page 221). 3. The edge plans shall be reviewed and monitored by the POM.	$0	Policy 7.2, pages 114-115; RMP2, page 221	3
12. Preserve Management	1. Identify areas that need to be closed (old or redundant roads) and implement a revegetation program in these areas. 2. Patrol regularly and remove any trash. 3. Check fences and gates, and repair as needed. 4. Implement a weed abatement program. 5. Put signs up to inform the public about the preserve and identify 24-hour contacts. 6. Begin to create a library and storage system for data collected by the POM for the Preserve.	$15,000	Policy 5.2; Policy 6.3; Policy 6.4; RMP, Chapter 4.5; RMP2, Appendix F7.	1
TOTAL		**$35,000**		

San Ysidro Mountains IOD Short Term Management

Subject	Short Term Management	Initial Cost	Reference	Priority
1. Coastal Sage Scrub	1. Establish one 100-acre study plot with four permanent line-intercept vegetation transects 100 meters long in locations selected by the POM, and monitor CSS habitat once a year for the first five years, then every three years. 2. Establish permanent photodocumentation stations in locations selected by the POM (RMP2, Appendix F11). 3. Conduct baseline surveys for Quino checkerspot butterflies or suitable habitat. 4. Identify populations of sensitive plants (30 species--see management plan text for the list of species possible on the property), and establish study plots to monitor these sensitive species as part of the overall habitat monitoring program. 5. Monitor sensitive birds (2 species: California gnatcatcher and Cactus wren) once a year for the first five years, then every three years. 6. Monitor sensitive reptiles/amphibians (2 species: Orange-throated whiptail and San Diego horned lizard) every three years. 7. Monitor sensitive invertebrates (2 species: Quino checkerspot butterfly and Hermes copper butterfly) directly or through identification of host plants every three years.	$5,000	RMP2, Appendix F11; County and City of Chula Vista MSCP	2
2. Grassland	1. Establish one study plot within the native grasslands area. Within the study plot, four permanent line-intercept transects 100 meters long shall be established in locations selected by the POM (RMP2, Appendix F11, pages 13-15 and 28-29). Permanent transects shall be randomly situated within the study plot; monitor habitat every three years. 2. Permanent photodocumentation stations shall be established along each vegetation transect to record existing conditions. 3. Conduct baseline surveys for Quino checkerspot butterflies or suitable habitat.	$2,500	RMP2, Appendix F11, pages 13-15 and 28-29; County and City of Chula Vista MSCP	2

San Ysidro Mountains IOD Short Term Management

Subject	Short Term Management	Initial Cost	Reference	Priority
3. Woodland	1. Two study plots shall be established, with four permanent line-intercept vegetation transects approximately 100 meters long (to include the stand of Tecate cypress on the property), in conformance with the protocols described in RMP2, Appendix F11, pages 16-17, 30); the dimensions of the transects may vary; monitor habitat every three years. 2. Permanent photodocumentation stations shall be established along each vegetation transect to record existing conditions. 3. Monitor sensitive invertebrates (2 species: Thorne's hairstreak butterfly and Harbison's dun skipper butterfly).	$3,000	RMP2, Appendix F11, pages 16-17, 30; County and City of Chula Vista MSCP	2
4. Wildlife Corridors	1. Maintain the viability of the corridor linking the upper elevations of the mountains to Lower Otay Reservoir (as shown in RMP2, Appendix F3, Figures 2-2 and 4-2): no paved trails, no fire management zones, no roads (except necessary road crossings), no fences that restrict wildlife movement, no structures, no controlled burns (RMP2, Appendix F3, page 4-7). 2. Within the corridor, four permanent line-intercept vegetation transects 100 meters long shall be established in locations selected by the POM. 3. Permanent photodocumentation stations shall be set at each study site in locations selected by the POM.	$1,500	RMP2, Appendix F3, figures 2-2 and 2-4; RMP2, Appendix F3, page 4-7	3
5. Raptors	1. Identify current and historic nesting sites, using the base information in RMP2, Appendix F4. 2. Establish a buffer zone with a radius of 3,000 feet around known golden eagle nest sites. 3. Restrict human activity near raptor nests during breeding season. 4. Retain large snags.	$2,000	RMP2, Appendix F4	3

San Ysidro Mountains IOD Short Term Management

Subject	Short Term Management	Initial Cost	Reference	Priority
6. Cultural Resources	1. This property has not been intensively surveyed for cultural resources, and must be surveyed. 2. Obtain a record search and conduct archival research to identify previously recorded archaeological sites. 3. Conduct a field survey of the property. 4. Record any sites that are found. 5. Prepare a report describing the resources and making recommendations for management.	$6,000	Policy 1.3C; Policy 2.12	1
7. Research	1. No short term actions are required.	$0	Policy 6.1	3
8. Access	1. Evaluate trail linkage possibilities. 2. Identify main access points for preserve management and emergency access.	$1,500	Policy 6.3; Policy 6.4	1
9. Easements	1. Identify existing easements and permits to enter (RMP1, figures 14-18); modify the language in the easements if feasible to reflect RMP management requirements. 2. Provide appropriate signage within the preserve and provide training for utility staff; obtain a staff contact for each utility and/or easement holder.	$3,000	Policy 6.6; RMP, figures 14-18; RMP2, pages 165-171	3
10. Fire Suppression	1. Coordinate fire suppression activities with USFWS and BLM. 2. Provide maps showing sensitive natural and cultural resources in the preserve to the City, CDF, and BLM in case of fire.	$1,500	Policy 6.7; Policy 6.8	1
11. Erosion Control	1. No immediate actions are required. 2. Observe erosion during and after storm events and take remedial actions as needed.	$0	RMP, Chapter 4.5	3
12. Edge Effects	1. Edge plans must be prepared for adjacent development. 2. No structures other than fencing and walls are allowed on the edge of the preserve (RMP, Policy 7.2, pages 114-115).	$0	Policy 7.2, pages 114-115	3

San Ysidro Mountains IOD Short Term Management

Subject	Short Term Management	Initial Cost	Reference	Priority
13. Preserve Management	1. Identify areas that need to be closed (old or redundant roads) and implement a revegetation program in these areas. 2. Patrol regularly and remove any trash. 3. Check fences and gates, and repair as needed. 4. Implement a weed abatement program. 5. Put signs up to inform the public that the area is a preserve, and identify 24-hour contacts. 6. Create a library and storage system for data collected by the POM for the Preserve.	$5,000	Policy 5.2; Policy 6.3; Policy 6.4; RMP, Chapter 4.5; RMP2, Appendix F7, pages 33-35	1
14. Baseline Studies	1. Perform baselines studies for the property, to include the following: A. Collect base data, aerial imagery, and previous studies; B. identify special status species expected on the property; C. collect and review local databases on species; D. conduct field survey to identify biological resources and to update existing vegetation mapping; E. conduct focused small mammal and herpetological surveys; F. conduct CAGN surveys; G. digitize field survey maps; H. produce sensitivity maps; I. prepare report summarizing the results of the baseline biological resource study in compliance with RMP requirements (RMP2, Appendix F11).	$20,000	RMP2, Appendix F11; County and City of Chula Vista MSCP	1
TOTAL		$31,000		